

Step 2. Project Abstract

Applicant Name: Anaconda-Deer Lodge County (ADLC)

Project Title: Water Metering and Distribution System Modeling Studies

Project Description and Benefits to Restoration:

Anaconda-Deer Lodge County (ADLC) faces two critical challenges with its public water infrastructure – it inherited a substandard water system from ARCO’s successors that was severely dilapidated and undercapitalized; and mining/smelting-related groundwater contamination significantly limits its ability to expand municipal supply. Based on its adopted 2004 *Municipal Water System Preliminary Engineering Report*, ADLC is striving to increase water conservation and reduce leakage as “replacement” for its inability to expand supply due to irreparable damage to area water resources.

UCFRB Restoration grants have been pivotal to these efforts since 2002, funding the replacement of over 32,000 feet of transmission and distribution mains to date. But over 50,000 feet of century-old, leaking, thin-walled steel distribution mains dating from the era of the Anaconda Company remain in the system. Even with the recent main upgrades, over 1.3 mgd of leakage likely remains in the system, approaching one-fourth of the current 6.6 mgd well field supply. Continued replacement of mains has been prioritized and scheduled in ADLC’s water master plan.

To supplement the 2004 master plan two critical evaluations are needed. With perceived prevalent opposition to system-wide water metering, an engineered metering study is needed along with an aggressive public outreach and education program. This will provide a defensible technical basis and current cost estimates for informed decision making on future metering implementation by the City-County with its residents. Meter-induced water conservation could potentially reduce consumption by 20 to 50 percent. Additionally the metering evaluation will dovetail with a forthcoming water rate study ADLC is preparing to address lagging financial capacity.

Secondly, following an NRD-funded system-wide leakage re-evaluation in conjunction with the East Third Street and South Birch Street water main replacements, a computer model of the distribution system needs to be developed. This was not included with the 2004 master plan, and lack of modeling capability has already resulted in some unforeseen hydraulic anomalies as the system is upgraded. Modeling of the full system, including supply/storage and piping facilities, will allow hydraulic verification and cost optimization of future proposed improvements. Based on modeling results, the water main replacement priorities set forth in the 2004 master plan will be re-evaluated and confirmed. The model will also be a continued tool for ongoing evaluation of system performance and needs.

To achieve these goals, ADLC is requesting UCFRB Restoration Funding in the amount of \$107,771, which it will match with \$6,247 in staff in-kind services to facilitate and support the studies. City-County Water Department and Planning Department staff will be integrally involved in the evaluations.

Unlike earlier proposals, the City-County is unable to afford a cash contribution this year as grant match. This results from the unanticipated reallocation of available cash in its Water Enterprise Fund to reestablish adequate reserves and coverage on a 1992 bond issue for well field and storage tank improvements, per a 2006 audit. Metering and modeling evaluations are intended to allow correction of current financial shortfalls and maximize the return on future infrastructure capitalization. They represent fiscally responsible planning on the part of the City-County to mitigate resource losses due to past mining-related degradation.

PROJECT BUDGET SUMMARY FORM									
EXPENSE CATEGORY		UCFRB RESTORATION FUND	APPLICANT CONTRIBUTION			OUTSIDE SOURCES			TOTAL
			Cash	In-Kind	Subtotal	Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES			\$4,880.20	\$4,880.20				\$4,880.20
2	FRINGE BENEFITS			\$1,366.46	\$1,366.46				\$1,366.46
3	CONTRACTED SERVICES	\$107,770.60							\$107,770.60
4	SUPPLIES AND MATERIALS								
5	COMMUNICATIONS								
6	TRAVEL								
7	RENT AND UTILITIES								
8	EQUIPMENT								
9	MISCELLANEOUS								
TOTAL		\$107,770.60		\$6,246.66	\$6,246.66				\$114,017.26

In electronic form this spreadsheet will automatically calculate the expense totals from the following Budget Detail Form.